

**ABSTRACT OF THE DISCLOSURE**

The invention provides a system and method for reliably and accurately measuring the gap between two materials when the depth of gap is less than the smallest distance that an optical thickness gauge (OTG) is able to measure. The invention is practiced by forming a suitable slot (or a groove, channel, hole or other suitable deformation) having a precisely known depth in at least one material. The sum of the distance of the gap and the depth of the slot is at least equal to the smallest distance that the OTG can measure. The slot is positioned over the materials and under the OTG probe head such that a cavity is formed. The depth of the cavity is measured. Since the distance of the slot is known, the depth of the gap is determined by subtracting the known depth of the slot from the measured depth of the cavity.